POORLY PREPARED PORK CAN CAUSE EPILEPSY

TAPE WORMS (TAENIA SOLIUM) AND EPILEPSY IN UGANDA

Taenia solium is a parasite transmitted between humans and pigs. This zoonotic disease forms larval cysts in humans and pigs that can lead to epilepsy and death in humans, reduces the market value of pigs and makes pork unsafe to eat. People become infected with the adult tapeworm form of the parasite (taeniosis) by eating infested raw or undercooked pork. Large numbers of the eggs of the tapeworm are shed in the infected person's stool and can be ingested by free-roaming pigs if people defecate outdoors.

Pigs develop the immature larval form of the parasite (cysticercosis) with hundreds to thousands of small cysts, commonly called 'pork measles', forming in their muscles, heart and brain, rendering the pork unfit for consumption. Pigs thus affected usually show no signs of disease. People can also become infected with the cystic larval form of the parasite by ingesting T. solium eggs either from direct contact with a human tapeworm carrier or from contaminated food and water - thus one does not need to raise pigs or consume pork to become infected with cysticercosis! In humans the cysts often develop in the brain, causing a condition called neurocysticercosis, which can cause severe headaches, epileptic seizures and sometimes death. Neurocysticercosis is considered to be the most common preventable cause of epilepsy in the developing world, rendering people incapacitated and unproductive, and sometimes leading to fatal accidents as a result of seizures.

The relationship between tapeworms and epilepsy came under the spotlight at a two day national workshop in Kampala, Uganda. The workshop brought together animal and human health professionals from sixteen districts of Uganda which are known to be endemic to be Taenia Solium Cysticercosis. The workshop hosted by the faculty of Veterinary Medicine, Makerere University Kampala was called to launch a one year project funded by FAO. The objectives of the project include;

- To assist the extent of Taenia Solium Cysticercosis in Pigs and humans.
- To contribute to the design and implementation of a strategy for effective surveillance, prevention and control of Taenia Solium.

The Ugandan Minister of Animal Industry, who opened the workshop, noted that pork consumption had greatly improved in the past few years and that the Uganda government was encouraging pig rearing as a way to boast rural incomes especially among rural women. He welcomed the project as it enhances government vision to combat rural poverty and that the project would benefit farmers, consumers and professionals. He appealed to participants and the project to find out ways and means how people keeping pigs on a free range basis could be protected from getting being predisposed to tapeworms from pigs. He encouraged the professionals to promote safe and hygienic pock production and consumption.

Presenters under the session Porcine Cysticercosis, pigs, pork and diagnostic capacity in Uganda all agreed that tape worms (taenia Solium) found in pork have been transmitted to humans and are responsible for up to 20% of epilepsy cases. It was mentioned that pigs kept by most rural farmers roam the compounds of their owners eating food leftovers and sometimes human waste carelessly disposed off by families. It was noted that in Uganda the government is vigorously promoting pig raring but has not established formal facilities for pork production, inspection and marketing. A lot of pork is therefore consumed before inspection and a lot of it may be infected by taenia solium. Veterinary doctors present in the workshop lamented that they are not empowered to advise farmers and lacked tools to inspect pork at slaughter houses.

Figures presented by researchers in both veterinary and medical fields painted an alarming picture of the level of infection in humans and pigs underlining the fact that this disease is a serious public health risk not only to rural people in pig rearing communities but also in urban areas who consume pork or come in contact with human tapeworm carriers.

A psychiatric with keen interest in epilepsy informed the meeting that he had documented cases of epilepsy as a direct result to taenia solium infection and confirmed the direct relationship between epilepsy and Cysticercosis.

An entomologist from the vector control division of the Ministry of Health, Uganda showed evidence that in studies carried out Oncho endemic areas of Uganda; it had been found out that tape worms are a causative factor to people with Oncho who also develop epilepsy. The Ministry of Health has therefore designed two national health days around March and the other in October each year. During these days all school going children are treated for worms and immunized against other diseases. This leaves out adults and out of school children.

The workshop also got a brief about the WHO/ILAE/IBE Global Campaign against Epilepsy – "Epilepsy out of the shadows" which aims to create awareness about epilepsy.

Participants were led through a stake holder analysis process and identified the stakeholders, their stake and how to ensure their continued interest and participation in taenia solium control project. It was noted that it is important to maintain open dialogue communication and deliver on all commitments made.